WASHINGTON STATE
WORKFORCE TRAINING AND EDUCATION COORDINATING BOARD
MEETING NO. 110
May 11, 2006

HIGH SKILLS, HIGH WAGES 2006
CHAPTER 5: OUR AGENDA FOR ACTION

This tab contains the first draft of *High Skills, High Wages 2006, Chapter 5: Our Agenda for Action.* The draft addresses the first three goals of *High Skills, High Wages 2006.* The fourth goal regarding integration of services will be added in the fall following the Board's review of the Workforce Development System.

The draft is based upon the input of the workgroups for each of the three goals, the Interagency Committee, and a review of the literature. It is a first draft. It is presented to the Board for the Board's review and direction. Following the May meeting, staff will complete the draft based upon the Board's direction and then disseminate it electronically to obtain wider input. Final adoption will occur in the fall.

Board Action Requested: Adoption of the Recommended Motion.

RECOMMENDED MOTION

WHEREAS, State statute RCW 28C.18.060 directs the Workforce Training and Education Coordinating Board to "Develop and maintain a state comprehensive plan for workforce training and education, including but not limited to, goals, objectives, and priorities for the state training system," and

WHEREAS, State statute RCW 28C.18.080 directs that the "state comprehensive plan for work force training and education shall be updated every two years and presented to the governor and the appropriate legislative policy committees."

THEREFORE BE IT RESOLVED, That the Workforce Training and Education Coordinating Board approves the dissemination of the draft *High Skills, High Wages: 2006, Chapter 5: Our Agenda for Action,* for public review and comment.

Our Agenda for Action

Goals, Objectives, and Strategies for *High Skills, High Wages: 2006* (Goals 1 – 3)[1]

Our vision is a workforce development system that offers every Washington resident access to high-quality academic and occupational skills education throughout his or her lifetime, effective help to find work or training when unemployed, the personalized assistance to make progress in the labor market, and Washington employers access to the skilled workforce they need. By anticipating and planning for economic and demographic changes, the workforce development system enhances the prosperity of the state.

We envisage our ideal workforce development system to be:

Responsive to the needs of our economy, our employers, our students, and our workers.

Connected—so that agencies and programs are working toward the same goals, utilizing resources effectively and efficiently; programs are seamless for participants.

Accessible—we meet our customers "where they are" overcoming financial and socio-economic barriers; providing articulated education and career opportunities so that individuals can re-enter education and training at any time throughout their lives.

Respectful of diverse cultures; we serve people of color, women, and individuals with disabilities ensuring that we remove education and employment disparities for these populations.

Comprehensive—Our workforce development system is comprehensive with the highest quality education, training, and employment services and the capacity to serve all those in need.

Our Goals

The goals, objectives, and strategies for *High Skills, High Wages: 2006* are the result of collaboration with workforce development stakeholders across Washington, representing employers, labor, education, public agencies, and community-based organizations.

The four goals for workforce development are:

1. **Youth:** Ensure all Washington youth receive the education, training, and support they need for success in postsecondary education and/or work.

2. **Adults:** Provide Washington adults (including those with barriers to education and employment) with access to lifelong education, training, and employment services.

[1] Goal 4 on system integration will be developed later. Please note this is only the draft goals, objectives, and strategies.

3. **Industry:** Meet the workforce needs of industry by preparing students, current workers, and dislocated workers with the skills employers need.

4. **Integration:** Integrate services provided by separately funded workforce development programs so that we provide the best possible service to our customers.

Moving Toward our Ideal Workforce Development System

The following section addresses the four workforce development goals by first identifying an objective and then providing strategies to ensure we move towards that objective. We outline strategies for the key customers in the workforce development system: Youth; Adults (including those with barriers to education and employment); and Industry (including employers and workers).

Strategies Serving Youth

Youth Goal: Ensure all Washington youth receive the education, training, and support they need for success in postsecondary education and/or work.

Objective 1: All students graduate on time.

1.1 Expand the Dropout Prevention Initiative to ___ more high schools. *Leads: Office of Superintendent of Public Instruction (OSPI), Employment Security Department (ESD), Workforce Training and Education Coordinating Board (Workforce Board), and Workforce Development Councils (WDCs).*

Objective 2: All students leave high school prepared for success in further education and/or work.

2.1 Increase the number of students who complete a career and technical education sequence and/or course requirements for admission to a four-year college or university. *Lead: OSPI.*

Objective 3: There is a Comprehensive Guidance System throughout the K-12 system that engages students and their parents in a comprehensive curriculum to individually plan the student's pathway to prepare for future education and/or work after high school.

3.1 Expand implementation of the Best Practice Comprehensive Guidance System, Navigation 101, across the K-12 system. *Leads: OSPI and Workforce Board.*

3.2 Integrate Individual Education Plans with the 13th year plan required for graduation. *Lead: Division of Vocational Rehabilitation, Department of Social and Health Services (DSHS) working with OSPI.*

Objective 4: There are secondary career and technical education programs throughout the K-12 system that enable students to explore career pathways and complete preparatory coursework that matches their aspirations. The career pathways are articulated with postsecondary education and training, and result in industry certification.

4.1 Boost the academic content of career and technical education programs and recognition of their academic course equivalencies. *Lead: OSPI.*

4.2 Develop model statewide career and technical education articulation agreements that provide a program of sequenced courses and ensure all students have access to dual enrollment options. *Leads: State Board for Community and Technical Colleges (SBCTC) and OSPI.*

4.3 Expand pre-apprenticeship training to prepare students for direct entry to apprenticeship programs. *Leads: Washington State Apprenticeship and Training Council at the Department of Labor and Industries and OSPI.*

4.4 Pilot the Work Readiness Credential for career and technical education completers. *Leads: Workforce Board and OSPI.*

Strategies Serving Adults, Including Those With Barriers to Education and Employment

Adults Goal: Provide Washington adults (including those with barriers to education and employment) with access to lifelong education, training, and employment services.

Objective 5: Increase the number of adults who have at least one year of postsecondary education and training and a credential.

5.1 Provide wrap-around support services, in addition to financial aid, to more low-income adults so they can complete at least one year of training and obtain a credential. *Leads: SBCTC working with DSHS.*

5.2 Expand Integrated Basic and Skills Training (I-BEST) programs to all community and technical colleges. *Lead: SBCTC.*

5.3 Establish industry-based credentials in occupational and general workplace skills for students who complete one-year of training. *Leads: SBCTC, Workforce Board working with Association of Washington Business Institute for Workforce Development, and Economic Sustainability.*

Objective 6: Case Management is accessible for all adults in need of special services.

6.1 Create and take advantage of opportunities to redirect resources to front line case management. *Leads: ESD, SBCTC, DSHS, and WDCs.*

Objective 7: Postsecondary education and training provides opportunities for going in and out of training over the course of one's working life.

7.1 Expand vertical and horizontal articulation among two- and four-year community and technical colleges and universities. *Leads: SBCTC and Higher Education Coordinating Board (HECB).*

7.2 Expand the availability of applied baccalaureate degrees. *Lead: SBCTC working with HECB.*

Objective 8: Comprehensive career information is readily accessible to adults.

8.1 Develop a "Navigation 102" model of comprehensive guidance to pilot in community and technical colleges workforce education programs and WorkSource Centers. *Leads: SBCTC, ESD, and OSPI*

Strategies Meeting the Needs of Industry (Including Employers and Workers)

Industry Goal: Meet the workforce needs of industry by preparing students, current workers, and dislocated workers with the skills employers need.

Objective 9: The Workforce Development System prepares workers with the strong general workplace skills that employers need.

9.1 A wide variety of local organizations will pilot the Work Readiness Credential. *Leads: Workforce Board, Workforce Development Councils (WDCs), Community and Technical Colleges, and Chambers of Commerce.*

Objective 10: The Workforce Development System supplies the number of newly prepared workers required to meet employer needs.

10.1 Increase capacity in mid-level education and training programs (greater than one year but less than four years) by __. *Leads: Governor, Legislature, and SBCTC.*

10.2 Increase Apprenticeship completers by __. *Leads: Governor, Legislature, Washington State Apprenticeship and Training Council at the Department of Labor and Industries, and SBCTC.*

10.3 Provide adequate funding for education and training programs that are in high-demand by employers. *Lead: Governor, Legislature, SBCTC, HECB, and four-year Colleges and Universities.*

Objective 11: The Workforce Development System strengthens key economic clusters by meeting employer and worker needs.

11.1 Further develop Industry Skill Panels by sustaining current panels, creating more panels in key economic clusters, establishing statewide panels in select industries, and by enhancing the ability of skill panels to leverage resources to address skills shortages. *Leads: Workforce Board*, *Governor, and Legislature.*

11.2 Establish additional Centers of Excellence in key economic clusters. *Lead: SBCTC.*

11.3 Increase the number of workers receiving customized training by __. *Leads: Governor, Legislature, and SBCTC.*

11.4 Develop expertise at WorkSource Centers in serving the unique needs of local employers in key clusters. *Leads: ESD and WDCs.*

11.5 Identify and support the development of economic clusters that provide a large number of middle wage jobs. *Leads: Seattle Jobs Initiative, Workforce Board, SBCTC, ESD, and Community, Trade and Economic Development (CTED).*

Objective 12: Unemployed workers return to suitable work in as short a time as possible.

12.1 Rapidly link dislocated workers with appropriate employment services and retraining programs. *Leads: ESD, WDCs, and SBCTC.*

What are our Challenges?

As outlined in the first two chapters, Washington's workforce is aging and becoming more ethnically diverse. It is also growing at a slower rate than in previous decades. The changes in our workforce and our economy pose both challenges and opportunities. The challenges of slower labor force growth and increasing skill needs make it essential that historically underutilized populations gain the knowledge and skills to succeed in tomorrow's economy. We need to ensure we develop a skilled workforce to contribute to employers success and thus promoting a thriving and competitive economy.

Youth, adults, and industry face specific challenges. Too many of our youth drop out of high school—only 70 percent graduate on time. Too many of our youth who graduate leave high school without adequate preparation for further education or success in the workplace. Many adults need support in finding work, retaining work, and moving up a career ladder so that they can earn a family-wage living. Our employers need more workers with mid-level preparation, those that complete workforce training programs at community and technical colleges, private career schools, and apprenticeships. Many of our current workers and dislocated workers need training to update their skills or learn new skills that meet the changing needs of the economy.

The next sections outline the challenges for serving the workforce development needs of youth, adults, and industry and provide the rationale for the strategies in *High Skills, High Wages 2006.*

What are our Challenges in Serving Youth?

In Brief: Key Issues for Youth

> *Isn't that what our education system should be about, shepherding our children towards their life goals? Yes, academic knowledge is important—who can survive today without a good grounding in math, science, reading, writing, technology and computer literacy?—but shouldn't the academic knowledge we teach be couched in what makes it useful in our kids' future life and work? Haven't we seen enough kids so turned off by school that they drop out and give up on their dreams? And haven't we seen how motivated young people can become when they see that what they are learning is helping them reach for the job they want, follow the career they seek, and fulfill the ambitions they have to change their world?*[2]

We face steep challenges in improving education and employment outcomes for our youth:

- Almost one in three students do not graduate on time with their cohort.
- Youth who drop out and many other students who remain in school do not see the connections between what they are learning and their futures; and many students leave school unprepared for further education and/or work.
- There are large disparities in education and employment outcomes between poor students and students from racial and ethnic minorities, and those with disabilities compared with the general youth population.

We have developed responses to address these deficiencies but we need to expand these efforts:

- Dropout Prevention Initiatives in several local areas reconnect youth who have dropped out with programs that help them earn credits toward their high school diploma. These programs also improve the achievement and motivation of youth at risk of dropping out. Programs may include specialist who connect youth with the services they need whether academic tutoring or support services. These programs are small and rare, and should be strengthened and expanded to reach more young people given the enormity of the size of the population in need.
- Intensive career and technical education (CTE) programs help students understand the connections between learning and their futures, and prepare them for further education and/or the world of work. Many schools offer only a limited CTE programs; many should be expanded from the "exploratory" to the "preparatory."
- While there are many CTE programs that offer dual enrollment options to enable students to gain credit toward high school graduation along with postsecondary credit, these often only articulate with one program at a small postsecondary institution. High school CTE plural enrollment options should offer articulation with a broad range of postsecondary programs creating a more efficient pathway.
- Some schools integrate transition portion of the individual education plan for students with disabilities with the 13th year plan required of all students, but this is not the common practice for most schools. Creating a single transition plan would de-stigmatize the IEP and increase efficiency.

[2] Jack Canfield, from Foreword to ***Career Pathways: Education with a Purpose***, Dan M. Hull, Cord, 2005.

- A few high schools and skills centers have developed pre-apprenticeship programs as part of their career and technical education offerings. These prepare students for apprenticeships and may lead to direct entry into apprenticeship programs when the student completes high school. Many more high schools and skills centers could develop pre-apprenticeship programs.

The Dropout Issue

The most serious issue for youth is the high dropout rate during secondary school, and sometimes earlier. In recent years, national studies conducted by organizations such as the Manhattan Institute and the Bill and Melinda Gates Foundation have highlighted the dropout issue for states across the nation. State studies, such as the interim report of the Governor's *Washington Learns* initiative (a comprehensive two-year study of Washington's entire education system) also emphasize the need to reduce the dropout rate.[3] As data have become more reliable and we follow the cumulative dropout rate beginning in grade 9, we have learned that a much higher number of youth are dropping out than we thought previously.

According to the Office of Superintendent of Public Instruction, "Of the students who began grade 9 in the fall of 2000 and were expected to graduate in 2004, an estimated 21 percent dropped out. About 70 percent of this cohort of students graduated "on-time" and 8 percent were still enrolled in school at the end of grade 12." During the same time period, only about half of American Indian, Black, and Hispanic students had graduated on time.[4]

The consequences of leaving school without a high school diploma are severe. Those who drop out of high school earn about 25 percent less than those who have a high school diploma, earning $21,600 per year compared to $30,800.[5] If you drop out you are "much more likely to be unemployed, living in poverty, receiving public assistance, in prison, on death row, unhealthy, divorced, and single parents with children who drop out from high school themselves." High dropout rates are a burden on our economy with fewer skilled workers paying income taxes, and increased costs of health care, social services and incarceration.[6]

Why do students drop out? A report from the Bill and Melinda Gates Foundation surveyed youth to ask them why they had dropped out of high school. Respondents reported a variety of reasons but the top reason is a lack of engagement and connection to their education. About half of respondents said their major reason for dropping out was that their classes were not interesting; they were bored and disengaged. About 70 percent of respondents said they were not motivated or inspired to work hard.[7]

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[3] Office of the Governor, *Washington Learns: 2005 Interim Report*, page 3, available at http://www.washingtonlearns.wa.gov/report/Interim2005_report.pdf.

[4] Bylsma, P. and Ireland, L. (2005). *Graduation and Dropout Statistics for Washington's Counties, Districts, and Schools*. Office of Superintendent of Public Instruction. Olympia, WA.

[5] *Education Pays, 2004: The Benefits of Higher Education for Individuals and Society*, Baum, S. and Payea, K., College Board (2004).

[6] John M. Bridgeland, John J. DiIulio, Jr., Karen Burke Morison, (2006). *The Silent Epidemic: Perspectives of High School Dropouts,* Civic Enterprises and Peter D. Hart Research Associates for the Bill and Melinda Gates Foundation.

Helping Students Finish School: Why Students Drop Out and How to Help Them Graduate, (2003), OSPI.

[7] John M. Bridgeland, John J. DiIulio, Jr., Karen Burke Morison, (2006). *The Silent Epidemic: Perspectives of High School Dropouts,* Civic Enterprises and Peter D. Hart Research Associates for the Bill and Melinda Gates Foundation.

In order to address dropout problems the Workforce Board joined forces with ESD and OSPI to create the Dropout Prevention and Intervention Initiative. Governor Gregoire awarded $1.34 million in Workforce Investment Act (WIA) funds to WDCs to jointly plan and deliver dropout prevention and intervention services with schools and community organizations. These WIA funds have leveraged about $2.2 million in Basic Education Act funds (as of June 2005) to coordinate a range of direct services retrieving dropouts back into an education setting, and retaining youth in school. While these programs are working well, they are only able to assist a tiny portion of all those in need.

The Dropout Prevention Initiative (DPI)

DPI provides local WDCs and schools with the flexibility to structure youth dropout prevention and retrieval efforts based on local needs and includes:
Prevention services – identifying students at risk of dropping out and providing support so that students stay and succeed in school
Retrieval services – providing rapid response or reentry services that bring young people back into an educational setting, and/or
Recovery programs – coordinating services to help young people to return to school and recover lost credits through seat time or competency testing; and resolving academic, social, or personal issues that inhibit successful learning.

Governor's Promising Practice: "Academic Intervention Specialist"
The Olympic WDC's DPI project received a Governor's Promising Practice Award in 2005. The WDC works with Educational Service District #114 (Bremerton, Port Angeles, South Kitsap, and Chimacum School Districts) and the Northwest Services Council and has served more than 50 youth in the region, including 15 youth who had dropped out and 35 students who were identified "at-risk" of dropping out.

A key component of the program is the addition of a caring, interested adult in the lives of these youth. The Interventionist and the WIA Youth Counselors work together to address the issues and circumstances that affect the young person's lack of success. This requires a look at not only the youth but also the other people in his/her life including the parents. This holistic approach allows for a more comprehensive and longer-term impact on the youth and those around them.

An "Intervention Specialist" coordinates a rapid response or reentry plan with school districts, builds a relationship with each student, and assists them in reconnecting with their school in either the traditional setting, the alternative schools or in the local community college if appropriate. The Intervention Specialist works with each youth to assess their current academic standing, number of credits needed to graduate and a variety of options. The Intervention Specialist then assists the youth in making the necessary contacts to accomplish this goal, and he/she maintains contact on a regular basis to monitor their progress.

The project far exceeded its projected outcomes. Over the 2004-2005 school year the project retrieved 15 dropouts (10 projected); retained 35 at-risk youth (25 projected); youth earned 92 credits towards graduation (20 credits projected); youth earned 23 diplomas (5 projected) and 47 youth were on track to receive diplomas (15 projected).

The Need for Comprehensive Career Guidance, Navigation 101

Many students leave high school without a clear direction and unprepared for further education or work. This may result in having to take remedial classes in college, dropping out of college, or spending several years or a lifetime in low-paid work. If K-12 students do not make a connection between the relevance of their learning and their future lives, there is also a higher risk of dropping out while in K-12. A new comprehensive career guidance model, *Navigation 101*, is having a powerful impact on student retention rates, increasing rigorous course-taking, increasing on-time graduation, and improving transitions to postsecondary opportunities.[8]

State graduation requirements include a thirteenth year plan for students to map out what they will do in the year after high school.[9] This is a good first step, but schools need to ensure that this activity is connected with a variety of other activities for the plan to be meaningful. Schools are only required to hire one person for both counseling and guidance purposes, so students may not be able to access the professional of guidance and support they need, and other staff and teachers may not be fully equipped to meet these needs.

Navigation 101, the comprehensive guidance model first established in the Franklin-Pierce School district, aims to motivate students in middle and high school so they can develop educational and career goals and be successful in meeting them. This comprehensive guidance model involves significant restructuring of the school system. The central component is a guidance curriculum. All students take a Navigation class twice a month over four years from middle school through high school with the same advisor throughout high school. The school restructures the schedule on Navigation days, and makes it a priority to meet students' chosen courses. Parents and guardians are involved in their children's goal development and course planning at annual student-led conferences during which the students share their performances, goals, interests, and plans.

The results from the first few years of implementation are outstanding. Since the model was implemented the percentage of students receiving one or more "F" grades dropped from 50 percent to 42 percent; the number of students taking "gatekeeper" courses in math and science has risen significantly from ___ to ___: and the number of students moving from 9th to 10th grade has increased from 70 percent to 81 percent.[10]

The interim report of the Governor's "Washington Learns" initiative recommends requiring a comprehensive career guidance program in secondary schools.[11] In 2006, the Legislature passed Engrossed Substitute Senate Bill 6255 that encourages all secondary schools to provide a comprehensive guidance program and provides student planning grants through OSPI. The Governor and Legislature allocated $3.98 million to OSPI for dissemination of the *Navigation 101* curriculum and for grants to implement the program in 100 school districts.

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[8] Tim Stensager, Executive Director, Technical & Career Education, Dan Barrett, program results included in a presentation to the House Higher Education Committee, 2006.

[9] WAC 180-51-061 lays out the minimum requirements for graduation. These include a "High School and Beyond Plan" also known at the Thirteenth Year Plan. The WAC states that, "Each student shall have an education plan for their high school experience, including what they expect to do the year following graduation."

[10] Tim Stensager, Executive Director, Technical & Career Education, Dan Barrett, program results included in a presentation to the House Higher Education Committee, 2006.

[11] Office of the Governor, *Washington Learns: 2005 Interim Report,* page 27, available at http://www.washingtonlearns.wa.gov/report/Interim2005_report.pdf

What is *Navigation 101*?
Navigation 101 is a comprehensive career guidance model that:

- Teaches students the skills they need to chart their own course through middle school, high school, post-secondary education, and adult life.
- Provides students with an ongoing, personal relationship with an adult that lasts throughout the four years of their high school career.
- Provides a meaningful way to keep parents involved in the decisions their teens are making.

All students take a Navigation class twice a month over four years from middle school through high school with the same advisor throughout high school. The central component is a career guidance curriculum that includes:

- Discussion and analysis of students' test results.
- Various assessments of personal interests and aptitudes.
- Goal-setting skill development.
- Planning for each year's high school course selection and personal goals.
- Independent living skills lessons, such as how to budget and how to balance a checkbook.
- Information about how the post-secondary education and training system works and how to access it.
- Development of a student portfolio and planning for annual, student-led planning conferences with their parents or guardians and their *Navigation* teacher.

In addition, students learn how to write a resume, how to use the full array of resources available to job seekers, including their local WorkSource Center, and how to enroll in programs that allow them to earn both high school and post-secondary credits for free, before high school graduation.[12]

"*The cornerstone of the model is the recognition that there are specific skills and a specific body of knowledge that every student needs to master in order to take charge of his or her own education, career, and life...this model has had a profound impact on student motivation, and on students' willingness to take on more challenging coursework."* - Tim Stensager, CTE Director and Founder of Navigation 101, Franklin Pierce School District

"This makes our future much more real to us." – student at Franklin-Pierce High School

Career and Technical Education Promotes Student Success
Secondary CTE plays a central role in helping students to be successful in their life after high school. CTE helps different students in different ways. CTE's applied learning techniques often enable students who are at risk of dropping out to achieve academic success for the first time in their school experience. At the same time, CTE connects learning to career aspirations, providing a reason to stay in school.

[12] Tim Stensager, Executive Director Technical & Career Education, Dan Barrett, Coordinator Career Education, Paper, "The Franklin Pierce Model for Student Education and Career Planning," 2004.

For students who were previously uninterested in math and science, CTE's direct applications of theory to practice often inspire a new interest in these subjects. CTE also helps students who are academically advanced to prepare for their career at an earlier age by acquiring skills that are relevant to their future education and careers.

In Washington, CTE completers continue on to postsecondary education at about the same rate as students who do not complete CTE. Students who do complete a CTE sequence have better employment and earnings outcomes than students of similar demographic characteristics who do not complete a CTE sequence. The tax revenue generated by the increased employment and earnings more than offsets that taxpayer cost of CTE.[13] In addition, national studies show that CTE can reduce the probability of dropping out of high school.[14]

Some CTE programs are planning to pilot the Work Readiness Credential as part of their CTE program. This would enhance the employability of students who complete a CTE sequence. See page XX for more on the Work Readiness Credential.

Brier Terrace 8th Grade Students in CTE "Sci-Ma-Tech" Industrial Technology Class:[15]

"In taking Sci-Ma-Tech, I realized there are a lot of technology-based jobs that I would be able to do."

"I've learned a lot of different design techniques. I am planning on being an architect and it has taught me how to do a lot of planning and designing and how to use the math in my designing."

"There were a lot of components that we learned in our Sci-Ma-Tech class that we had in the WASL. Sci-Ma-Tech helped me to remember the science for the WASL."

"The class got me extremely excited about science and math. Because it integrates math, science and technology with English, I really enjoy these subjects now. When you're having fun you learn more and remember more, even those social skills that go along with hands-on learning projects. I think this program has helped many students to learn math, science and technology".

Policymakers and educators are beginning to recognize the significance of CTE in supporting education reform. As described by Dr. James Stone of the National Research Center for Career and Technical Education, CTE is a program that is both a classroom experience and a structural experience. The classroom experience includes work-based learning, student learning organizations, and preparation of the teachers. The structural experience includes dual credit options, skills centers, career pathways, career academies, among other components.[16]

[13] Workforce Training and Education Coordinating Board, *Workforce Training Results 2006.*
[14] Dr. James Stone, presents results of his study on "Math-Enhanced CTE," CTE National Resea4rch Center, , University of Minnesota, National Dissemination Center for Career and Technical Education webcast, December 13, 2005 archived at http://www.nccte.org/webcasts/description.aspx?wc=188
[15] Senate Early Learning, K-12 and Higher Education Committee work session, presentation on Sci-Ma-Tech, Industrial Technology CTE class at Brier Terrace Middle School, January 11, 2006.
[16] Dr. James Stone, presents results of his study on "Math-Enhanced CTE", CTE National Resea4rch Center, , University of Minnesota, National Dissemination Center for Career and Technical Education webcast, December 13, 2005 archived at http://www.nccte.org/webcasts/description.aspx?wc=188

CTE courses can teach a broad range of academic knowledge through applied learning. For example, a 2005 study from the National Research Center for Career and Technical Education found that enhancing the CTE curriculum with math significantly improves the math skills of students.[17] If we are to take advantage of CTE as a way of boosting academic achievement and preparing students for life beyond high school, school administrators and faculty should search for ways to increase the academic content taught in CTE. We must also ensure the content is recognized and credited towards graduation requirements and college admission. In 2006, the Washington State Legislature passed SHB 2937 requiring school districts to establish a process for crediting academic knowledge taught in CTE.

Math-Enhanced CTE: A Study by Dr. James Stone, National Center for CTE[18]

The study explored whether "Math-enhanced CTE" would improve math achievement of students and what effect this would have on occupational learning. In "Math-enhanced CTE" the teacher introduces the lesson, introduces embedded math, so the student is hardly aware that it is "math", provides related contextual math examples, and finally a more traditional math example so the student becomes aware that they are learning math.

The year long study included 3,000 students, over 150 teachers, in 10 states, and 5 CTE applications (Auto Tech, Business, IT, Agriculture and PT, and Health). Teachers received professional development, pedagogy and curriculum mapping training. They set up learning communities of teachers in each application, videotaped some of the classes and interviewed teachers after the study.

The study found that "Math-Enhanced CTE" significantly improves the math learning of students. At the same time, "math-Enhanced CTE" does not negatively impact the learning of occupational skills and knowledge.

"CTE provides a math-rich curriculum - though we haven't taken the best advantage of this opportunity to teach math." - Dr. James Stone

"(Since the 80's) the increase (in average Carnegie units for graduation) has been almost exclusively in science and math. But, what has that increase in course-taking brought us? It doesn't seem to have bought us very much. While more middle and high school students are required to take more math, and more algebra, it hasn't translated to any improvements on the NAEP test in 30 years..." - Dr. James Stone

Improving Transitions for Youth with Disabilities

While youth with disabilities are required to complete an Individual Education Plan (IEP), with a transition component, it is not often connected with the 13th year plan required for all students for graduation. Some well-intentioned teachers, counselors and parents are not fully aware of the education and employment opportunities for students with disabilities. The Center for Change in Transition Services at Seattle University is dedicated to improving transitions from school to

[17] Stone, J. R., III, Alfeld, C. Pearson, D., Lewis, M. V., & Jensen, S. (2005). *Building academic skills in context: Testing the value of enhanced math learning in CTE* (Pilot study). St. Paul, MN: National Research Center for Career and Technical Education. (Available from National Dissemination Center for Career and Technical Education, The Ohio State University, 1900 Kenny Road, Columbus, OH 43210-1016; http://www.nccte.org)

[18] Dr. James Stone, "Math-Enhanced CTE", CTE National Research Center, University of Minnesota, December 2005.

education and work for students with disabilities. The Center educates parents, counselors and educators about the wide variety of opportunities available to students with disabilities. The Center advises that in addition to the graduation requirements for all students the following activities should be "non-negotiable" for students in Special Education:

- Identifying post-secondary goals.
- Developing and implementing a course of study to reach goals.
- Developing IEP goals to provide specially designed instruction.
- Identifying appropriate postsecondary agency linkages.
- Conducting post-school research to measure outcomes.[19]

Tech Prep and Career Pathways: Improving Transitions to College

One way of connecting youth with postsecondary education is to ensure that high school programs articulate with college programs, so that students can take a sequence of classes that lead directly into postsecondary coursework. Tech Prep is a national educational initiative in the Carl D. Perkins Act, Title II that aims to strengthen connections for CTE students to postsecondary study. According to the legislation Tech Prep programs must:

- Lead to an associate degree, two-year certificate, or apprenticeship.
- Provide technical preparation in at least one field of engineering technology; applied science; mechanical, industrial, or practical art or trade; or agriculture, health, or business.
- Build student competencies in mathematics, science, technology, and communications through a sequential course of study.
- Lead to employment or further education.[20]

Many Tech Prep programs in Washington offer dual enrollment courses that enable students to obtain credit towards high school graduation and college credits at the same time. Tech Prep programs, however, need to move beyond single course articulation agreements to broad agreements so that a sequence of courses articulates with a variety of fields of study at the postsecondary level.

Pre-Apprenticeships—A Running Start Program for CTE

Pre-apprenticeship programs offer another career pathway option. The interim report of the Governor's "Washington Learns" initiative recommends creating "pre-apprenticeship programs for high school students that lead to an apprenticeship after graduation. Students who participate in this pathway will be expected to meet all academic requirements for high school graduation."[21] In 2006 the Governor initiated and the Legislature passed a bill to increase the number of students preparing for apprenticeship training. Second Substitute House Bill 2789 directs the Washington State Apprenticeship and Training Council to oversee direct-entry programs into apprenticeships for secondary students. The 2006 supplemental budget provides $175,000 for grants to develop programs.

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[19] Dr. Cinda Johnson, Ed.D., Center for Change in Transition Services, presentation, "*Aligning High School Reform and Transition Services for Youth in Special Education*," 2005.
[20] Carl D. Perkins Act of ___ find reference...
[21] Office of the Governor, *Washington Learns: 2005 Interim Report,* page 28, available at http://www.washingtonlearns.wa.gov/report/Interim2005_report.pdf

Text Box on Spokane program to be completed later.

What are our Challenges in Serving Adults?

The economic well-being of low-wage workers and their families has become a focus of mounting public concern. Low-wage workers represent a sizable and growing segment of the nation's labor force and are critical to the success of the U.S economy. However, they typically struggle to make ends meet and often go without health insurance and other benefits. At the same time employers in high-demand and high-growth sectors in may areas of the country report having serious difficulties in filling second-and third-level job openings (that is, openings for positions above entry level requiring additional training and skills), and employers are concerned with job turnover and low retention rates among low-wage workers in many industries- and with associated costs. - A New Approach to Low-Wage Workers and the Economy, MDRC[22]

Our workforce development system should provide education and training opportunities for adults that help them get a job, or a better job, and increase their earnings. We need to meet adults "where they are"—whether they are low-skilled, low-income, lack English language proficiency, or are individuals with disabilities. Participants in workforce development programs say they need more access to career information. Others who need education and training never begin a program because they cannot overcome childcare, transportation, and financial barriers. Individuals often need one person, a case manager, or career advisor, to help them identify their goals and develop a plan for getting there. With one year of postsecondary training and a credential, adults who were previously low-skilled are able to increase earnings substantially. Since Washington's employers report they have the greatest difficulty finding workers with mid-level preparation targeting education and training resources to help adults move up a career ladder, would also help to meet the needs of employers and the economy.

Achieving the "Tipping Point"

A longitudinal study by SBCTC tracked 35,000 community and technical college students who entered a community or technical college with a high school education or less, or who were lacking English language proficiency. The study found that if these low-skill adults receive at least one year of postsecondary education and a credential, they can significantly improve their earnings.[23] One year of postsecondary education and a credential is the "tipping point," less than that does not appear to make a significant difference for most adults in this population. In Washington:

- One out of every four persons 18 to 24 years old has no high school diploma.
- More than one third of the working population (25 to 49 years) has a high school education or less.

[22] Jacquelyn Anderson, Linda Yuriko Kato, James A. Riccio, *A New Approach to Low-Wage Workers and Employers: Launching the Work Advancement and Support Center Demonstration,* MDRC, March 2006.

[23] David Prince, Davis Jenkins, "Building Pathways to Success for Low-Skill Adult Students: Lessons for Community College Policy and Practice from a Statewide Longitudinal Tracking Study," April 2005. The study is part of the Ford Foundation's "Bridges to Opportunity Project."

- Non-English speakers 25 or older doubled to XX in the 2000 census.
- Nearly half of Latino/Hispanics 25 years or older have less than a high school education.[24]

Lower education levels are associated with higher rates of poverty. If we are to reduce the dependence on welfare, and improve the earnings of the working poor, we need to provide education and training opportunities that will lead to increases in their future earnings.

The "Tipping Point"

One year of postsecondary education plus the attainment of a credential leads to:

- An increase of $7,000 in additional yearly earnings for students who enter postsecondary education to study English as a Second Language.
- An increase of $8,500 in additional yearly earnings for Adult Basic Skills students.
- An increase of $2,700 and $1,700 respectively in additional yearly earnings for workforce students entering with only a GED or High School diploma.[25]

The study tracked 35,000 students who came to Washington's community and technical colleges with a high school education or less, or who were lacking English language proficiency.

Integrating Basic and Skills Training Improves Earnings

Few students in adult basic skills programs transition to occupational skills training. Both state and national research, however, shows that basic skills training is more likely to increase earnings when it is combined with occupational skills training.[26] For example, a CLASP report that examined programs in other states found linking basic education, including ESL, with occupational skills training can have a dramatically positive effect on earnings. The report also asserts basic skills and occupational skills instruction could be even more effective if combined with soft skills training to help immigrants understand and advance in the U.S. workplace culture.[27]

Since 2003, SBCTC has provided funds to support the "I-BEST" program. For three years, SBCTC funded demonstration projects, defined a model that includes at least 50 per cent overlap of basic skills and vocational instruction, identified best practices, and provided systemwide training on implementing innovative practices. Approved programs can claim an enriched funding for full-time equivalent students to offset the higher costs of providing these programs. 2006 plans include expanding this integrated model to adult basic education and vocational programs to all colleges across the state. The colleges are also examining other ways to link basic and occupational skills training, to help students transition beyond basic education, and prepare them for good-paying jobs.

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[24] Tina Bloomer, David Prince, *Ford Foundation Project: 'Bridges to Opportunity – Postsecondary Success for Low-Income Students*, presentation to the House Higher Education Committee, September 16, 2005. These statistics cite the Washington State 2002 Population Survey and the 2000 Census.

[25] Tina Bloomer, David Prince, *Ford Foundation Project: 'Bridges to Opportunity – Postsecondary Success for Low-Income Students*, presentation to the House Higher Education Committee, September 16, 2005.

[26] Workforce Board, *Workforce Training Results 2002: An Evaluation of Washington State's Workforce Development System*, 2003, pages 48-54.

[27] Heide Spruck Wrigley, Elise Richer, Karin Martinson, Hitomi Kubo, Julie Strawn, The Language of Opportunity: Expanding Employment Prospects for Adults with Limited English Skills, National Adult Education Professional Development Consortium, Center for Law and Social Policy, August 2003.

I-BEST in Action: ESL Pathway to Licensed Practical Nurse Degree

Renton Technical College has integrated English as a Second Language (ESL) with the Licensed Practical Nurse program. In January 2005, 30 ESL students with a serious interest in nursing and an English level of 4 or 5 enrolled in the ESL Pathway to a Licensed Practical Nurse Degree. The six-quarter program includes three quarters in the ESL Pathway followed by three quarters in the Traditional Pathway with continued ESL support.

To provide time for language skills support, courses in the ESL Pathway are longer than the traditional pathway but the content is identical. The courses in the first three quarters include: Speech, Biology, Language Learning Lab, Introductory Math, Nursing Assistant, Microbiology, and an Internship.

Students become Certified Nursing Assistants at the end of three quarters and Licensed Practical Nurses with an Association of Applied Science degree upon successful completion of the program and licensure exams. Students may then transfer to an Associate of Science Degree in Nursing and then a Bachelors of Nursing Science.

Creating Industry-Based Credentials

Many low-skilled adults who are not employed or who have difficulty retaining work, could benefit from gaining a basic "work readiness credential." Washington is working with the U.S Chamber of Commerce, major national industry representatives, and other states to establish a certification of work readiness for entry-level jobs as defined by employers. The Work Readiness Credential is based on learning standards created by the National Institute for Literacy and focuses on application of knowledge and skills in a variety of work settings and across industries.

Many workers find they must gain more education in order to move up a career ladder. They would benefit from expanded efforts to establish competency-based curricula and assessments. These could provide a vehicle for granting credit based on prior education or skills learned on the job so that workers would not waste time in a classroom on material they already know.

The Work Readiness Credential is certification of work readiness for entry-level jobs as defined by employers.[28]

What is the value to employers?

Employers using the credential will reduce recruitment costs, improve productivity, minimize turnover, and lower on-the-job training costs by being able to confidently hire entry-level workers who can:

- Complete work accurately.
- Work in teams to achieve mutual goals and objectives.
- Follow work-related rules and regulations.
- Demonstrate willingness to work and show initiative.
- Display responsible behaviors at work, including avoiding absenteeism and demonstrating promptness.

[28] Adapted from the U.S Chamber of Commerce's, Center for Work Preparedness, and Equipped for the Future's Work Readiness Credential brochure.

How will it help jobseekers?
The Work Readiness Credential will enable job seekers to demonstrate to prospective employers that they have the knowledge and skills needed for successful performance as entry-level workers. Entry-level workers benefit because the credential:

- Is the first step on a career path.
- Helps entry-level workers identify the skills they need to strengthen their performance on the job and carry out entry-level tasks successfully.

Helping Students Stay in School with Financial Aid and Support Services

"Many students who start out at community college fail to persist. Nationwide, half drop out and do not re-enter within a six year period. Many students lack good academic preparation, many do not have a high school diploma, and many non-traditional students are balancing the competing demands of going to school, family, and work. These students lack support and this leads to dropping out of college. They need academic and career guidance, personal support, financial support for tuition, books, travel and childcare and other wrap-around services." - Thomas Brock , MDRC[29]

"As college attendance has become more common, the profile of the typical college student has changed beyond recognition. Today, just one of four undergraduates nationwide is a "traditional" student, meaning that just one of four enrolled in college immediately after high school, attends full-time, works part-time or not at all, and is financially dependent and unmarried without children. Only 10 percent of undergraduates have all of these characteristics of "traditional" students and also attend a four-year college and reside on campus."[30]

Many studies have highlighted the lack of persistence of students in postsecondary education. According to the U.S Department of Education, more than a quarter of students who enter a four-year public educational institution do not persist beyond their first year, and one-fifth of those enrolled full-time at community and technical colleges leave after a year. Among part-time community college students, almost half leave after a year. In Washington, the five year graduation rate for public baccalaureate institutions ranges from 36 percent to 64 percent depending on the institution.[31]. Lack of preparation for college-level work is part of the problem, and over half of two-year enrollees have two or more "risk factors" such as full-time employment, completion of a GED, and delayed or part-time attendance when first starting college.

In 2005 the Washington State Legislature passed House Bill1345 creating a pilot program to provide financial aid to working adults. Many students at community and technical colleges are working adults who have to attend part-time; this usually makes them ineligible for federal and state financial aid. SBCTC is working with the HECB to track outcomes for students that are participating in this pilot.

The 2006 Legislature took this concept of support for working adults one step further. Since financial aid is not the only barrier to students persisting or even entering postsecondary

[29] NCCTE Webcast: Serving Adults and Nontraditional Students, October 18, 2005 http://www.nccte.org/webcasts
[30] Dan Bloom and Colleen Somo, *Opening Doors, Building Learning Communities: Early Results from the Opening Doors Demonstration Projects at Kingsborough Community College*, June 2005.
[31] HECB, *Key Facts about Higher Education in Washington,* January 2005, page 43.

education, a 2006 Supplemental budget proviso created an "Opportunity Grant" program. The Legislature allocated $4 million to the State Board for Community and Technical Colleges to conduct a pilot program that will provide financial aid and support services to low-income students in job-specific programs. In addition to financial support for tuition, students could receive financial support for books, childcare, transportation, personal or career counseling, or academic tutoring.

Bridging Education and Work

Every two years the Workforce Board evaluates workforce training programs, asking employers and participants about their satisfaction with how the programs prepared them for the job, and other measures. One of the consistent responses of students in community and technical college workforce programs (as is the case in most workforce development programs) is that they were not given enough information about job openings or links with career opportunities.[32]

Colleges need to provide a systematic way to link all students to career information and work-based opportunities such as internships. Some students are skilled in navigating the world of work once they leave college, but many need guidance. While campus counselors can provide support, there are too many students to serve. One suggestion is to create a "Navigation 102" in community and technical colleges, adapting the K-12 student-centered planning model (see page XX for discussion on this model).

Improving Articulation and Transfer between Postsecondary Institutions

Washington has developed an articulation system for accepting course work for students transferring from two-year to four-year public postsecondary institutions through the development of statewide articulation agreements. We provide clear pathways for Associate of Arts to Bachelor of Arts, and Associate of Science to Bachelor of Science. While these provide coherent transfer options for many students, many others are still having to repeat coursework or are not aware of the courses they need to take in preparation for transfer. Additional statewide agreements between two-year and four-year institutions, and the development of a course numbering system recognized by all intuitions would help more students to transfer efficiently from two-year to four-year institutions and between two year and four year institutions.

Following direction of 2004 legislation, Substitute House Bill 2384, the HECB has been working with two-year and four-year institutions to develop further statewide transfer agreements in nursing, engineering and elementary education, and other areas.

For students who complete professional/technical degrees there are insufficient transfer options. In Washington only about 5 percent of students with technical degrees transfer.[33] Many students who complete associates degrees in technical fields study in an *applied* context and carry applied credits from technical programs but may not be able to use these credits for transfer purposes to complete a four-year degree. By offering baccalaureate level *applied degrees*, institutions could recognize and grant credit for courses with an applied focus, and this would allow students to obtain additional qualifications when needed.

[32] *Workforce Training Results.*

[33] A small number of students (about 250 per year) transfer from two-year to four-year institutions with technical credits based on individual articulation agreements. These are concentrated in particular programs (such as Associate Degree Registered Nurse) that can articulate with a Bachelors of Science in Registered Nursing.

In 2006, the state Legislature and Governor appropriated $904,000 to support the development of four applied baccalaureate degrees to carry out legislation passed in 2005.[34] These pilots will provide important information on how to develop more pathways for professional-technical students to advance efficiently along their educational pathway.

Another transfer barrier exists between private career schools and public community and technical colleges. Students attending private career schools trying to enter the public system find they may have to duplicate coursework because the receiving community or technical college only accepts credits from regionally accredited schools, and most private career schools are nationally accredited.[35] Private career schools must be part of the discussion on articulation and transfer arrangements to ensure the state policy supports all students as they continue their education.

"America's agility gives us an edge in the global race. In the United States, labor markets are flexible, allowing employers enormous agility in hiring, paying, and allocating human resources. ...But there is a dark side to America's flexibility. It allows us to get away with underinvestment in human capital and makes us a nation divided into education haves and have-nots. Here, the cost of education failure is borne by those with low skills, who are left with few options."[36]

Directing Resources to Frontline Case Management

A key resource that Washington offers low-wage or unemployed workers is the WorkSource system, where people can go to review job openings and obtain career counseling in addition to other services. The job seekers' main goal is usually to improve their employment and earnings. While this seems obvious, our local case managers have to juggle a variety of federal, state and local programs with varying eligibility requirements, this may confound their efforts to meet the goals of their customers.

Many customers need special services to help them advance, and they depend on the knowledge and skills of the frontline case managers in WorkSource Centers. These managers need regular training and support to keep them up to date on providing special services and to develop their skills in career guidance. They will also benefit from state-of-the-art administrative and management systems.

[34] Engrossed Second Substitute House Bill 1794 passed in 2005 directed the SBCTC to work with four community and technical colleges to develop options for applied baccalaureate degrees as transfer options for students with professional/technical associate degrees.

[35] Ronald Phipps, *Transfer of Credit from Nationally Accredited to Regionally Accredited Institutions*, Career Training Foundation, December 2001, and Personal communication with Gena Wikstrom, Executive Director, Washington Federation of Private Career Schools.

[36] Anthony P. Carnevale – Education Week, "Education and the Ecoomy: If We're So Dumb, Why Are We So Rich?"

What are our Challenges in Serving Industry?

"While the United States already has the highest proportion of highly skilled workers of any advanced society, it also has a very high proportion of low-skilled workers, and relatively few in the middle range of the skills ladder..." - New Economy Information Service[37]

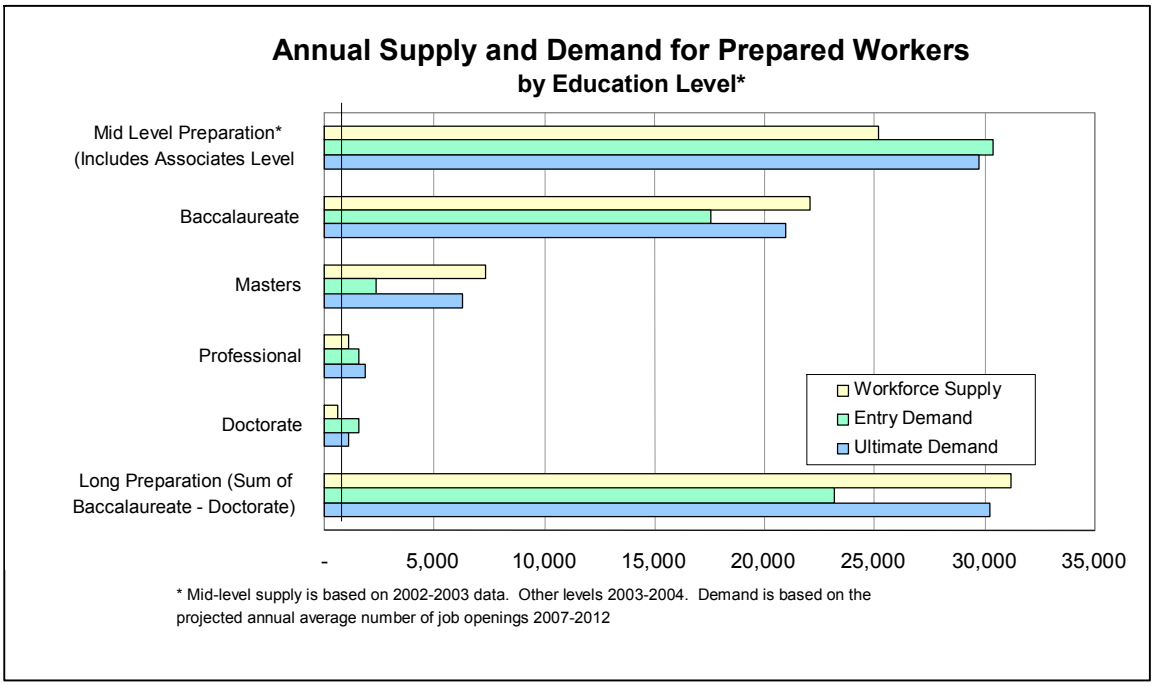
Washington's employers cannot find enough skilled workers. Our higher education system undersupplies new workers with mid-level training from community and technical colleges, private career schools, and apprenticeships. Our four-year colleges and universities fall short of meeting employer demand in technical fields. We provide, relative to other states, modest support for employers seeking training customized to their unique needs. The Workforce Board's 2006 employer survey found that skill shortages are hurting employers by "limiting output or sales, lowering productivity, and reducing product quality."[38]

The Need for Workers with Mid-Level Preparation Surpasses All Other Levels
A persistent and pressing problem for Washington is our failure to provide enough newly prepared workers who receive mid-level preparation—that is at least one year but less than four years of postsecondary education. We are currently meeting only 83 percent of employer demand for workers with mid-level preparation.[39]

2004 legislation directed the HECB, SBCTC, and the Workforce Board, to conduct a joint assessment of employer needs for postsecondary needs every two years.[40] The assessment looks at the gap between the number of forecasted job openings at each level of higher education and the number of workers prepared with the education to meet that demand. Figure 1 shows the number of workers in demand at each level of higher education compared to the supply.

[37] "Learning Partnerships: Strengthening American Jobs in the Global Economy", A Report of the Task Force on Workforce Development, Albert Shanker Institute, New Economy Information Service, 2004.
[38] Washington State Employers' Workforce Training Needs and Practices, Workforce Training and Education Coordinating Board, 2006.
[39] Washington State Employers' Workforce Training Needs and Practices, Workforce Training and Education Coordinating Board, 2006.
[40] 2004 Legislation, House Bill3103, directs the three agencies to conduct "an assessment of the number and type of higher education and training credentials required to match employer demand for a skilled and educated work force. The assessment shall include the number of forecasted net job openings at each level of higher education and training and the number of credentials needed to match the forecast of net job openings."

Figure 1



Source: Higher Education Coordinating Board, State Board for Community and Technical Colleges, and the Workforce Training and Education Coordinating Board, "A Skilled and Educated Workforce: An assessment of the number and type of higher education and training credentials required to meet employer demand," December 13, 2005.

Employers' greatest need is for workers with mid-level preparation. In 2002-2003 there was a supply of about 25,200 newly prepared workers coming out of community and technical colleges, private career schools, and apprenticeships at this level. Employers, however, will have an average of about 30,390 annual job openings at this level of education between 2007 and 2012. If we maintain the current rate of participation in mid-level education and training, the supply will fall short of employer demand. If we are going to avoid this, the Governor and Legislature must change higher education enrollment policy—boosting capacity in mid-level preparation programs above the current participation rate.

At the baccalaureate level there is basically a match between aggregate supply and demand. There are, however, some baccalaureate programs that are not meeting employer needs. The shortage of baccalaureate prepared workers is concentrated in the areas of health care; computer science; engineering; and the education fields of math, science, and special education.[41]

This labor market analysis of supply and demand for higher education corresponds with the results of the employer survey. In the survey, more reported difficulty finding job applicants with mid-level postsecondary education than any other level.

[41] Higher Education Coordinating Board, State Board for Community and Technical Colleges, and the Workforce Training and Education Coordinating Board, "A Skilled and Educated Workforce: An assessment of the number and type of higher education and training credentials required to meet employer demand," December 13, 2005.

Expanding Apprenticeships
Employers need more workers with apprenticeship training, particularly in construction, electronics, and the energy industry.[42] Apprenticeships are rigorous programs that combine on-the-job training with classroom study (known as Related Supplemental Instruction or RSI). Apprenticeships are a very attractive option as students can earn while they learn, and wage and employment outcomes are the highest of all workforce programs.[43] It is important that we ensure that young people are aware of apprenticeship opportunities and how to prepare for them. Since apprenticeship programs can be very competitive to enter, youth should have the ability to prepare for this competition while still in high school.

Increasing Education and Training Opportunities in High Demand Areas
Some postsecondary programs prepare participants for occupations that are in high demand by employers. Often these high demand programs, such as health care, engineering and computer science are also high cost. With declines in state funding for higher education and funding per student allocated at the same rate no matter the cost of the student's program of study, colleges and universities have a financial disincentive to expand higher cost programs. One way to expand high-cost, high-demand programs is to provide earmarked funding at an enhanced rate of funding per student.

SBCTC is dedicating 10 percent of the colleges' enrollment enhancement for the 2005-2007 biennium to support high demand programs. The programs are funded at an enhanced rate of about $9,000 per student FTE. In the 2006 supplemental budget the Legislature appropriated $1,500,000 to SBCTC to increase high demand enrollments by an additional 187 student FTEs. The 2006 Legislature also appropriated $900,000 to the HECB to contract for 80 student FTEs in high-demand fields at the regional colleges and the Evergreen State College, and appropriated additional monies for high demand programs to the University of Washington (engineering, math and science) and Washington State University (nursing, engineering and construction management).

Boosting Our Economy Through Workforce Development

Key Economic Clusters: *A cluster is a geographic concentration of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions (for example, universities, standards agencies, and trade associations) in particular fields that compete but also cooperate.* - Michael Porter[44]

Key economic clusters are those in which the market has demonstrated that a region has a competitive advantage over other regions. Examples include software and aerospace in central Puget Sound, and agriculture and food processing in Eastern Washington. By targeting resources, including workforce development, to key clusters the state can strategically reinforce market success.

[42] Washington State Apprenticeship Training Council
[43] Workforce Board, *Workforce Training Results*
[44] Michael E. Porter and Debra van Opstal, *U. S. Competitiveness 2001: Strengths, Vulnerabilities and Long-term Policies*, Council on Competitiveness, 2001.

Workforce development plays a vital role in supporting economic clusters. Recognizing this, in 2006 the Washington Economic Development Association's three priority issues related to workforce development.[45]

Two tools by which the workforce development system supports key clusters are Industry Skill Panels and Centers of Excellence. Industry Skill Panels are partnerships of businesses, labor, and education and training providers in an economic cluster. The panels identify workforce needs in the cluster, and identify and implement solutions to close the gaps. Since 2000 the Workforce Board has provided funding to establish 41 skill panels.

Centers of Excellence
Since 2004, the State Board for Community and Technical Colleges has provided funds to community and technical colleges to establish Centers of Excellence. The Centers focus on building education and training programs that meet the needs of a key economic cluster. There are now eleven Centers in key clusters including agriculture, allied health, construction, education, energy, homeland security, information technology, and manufacturing. Industry representatives guide the Centers and the Centers serve as a resource for workforce development programs across the state.

Construction Center of Excellence

Renton Technical College hosts Washington's Construction Center of Excellence (CCE). The CCE is Washington's innovation hub for education and training in construction, a premiere resource for industry, educators, and colleges.

The primary charge of the CCE is to serve as a point-of-contact and resource hub for information on industry trends, best practices, innovative curriculum, and professional development opportunities. The CCE also maximizes resources by bringing together workforce education and industry partners in order to develop highly-skilled employees.

The CCE:
- Showcases innovative education offerings at Renton Technical College and other colleges.
- Promotes career pathways within construction, particularly for young people and individuals from under-represented groups.
- Advocates for construction education and career guidance initiatives and policy development.
- Develops products, services and courses specific to construction education.
- Hosts annual conferences for industry, labor and education, as well as events for students.

See more at: http://www.rtc.edu/communityresources/CCE/

Updating Workers' Skills Keeps Workers and Industry Competitive
One of the most effective ways to increase the competitiveness of employers is to provide training customized to their specific needs. Until very recently, Washington ranked near the bottom in per capita expenditures among the 47 states with customized training.

[45] Washington Economic Development Association

Washington's investment in customized training has increased but still lags where other states have been. The 2006 Legislature increased the appropriation for the Job Skills Program to about $2.5 million for FY 2007. The Legislature also created a new customized training program with an appropriation of just over $3 million. As of 1998, based on the National Governors' Association survey of states, the average state program was funded at about $10 million per year.

Rapidly Responding to the Needs of Dislocated Workers

If we are successful in upgrading the skills of incumbent workers, we will have gone a long way to prevent worker dislocation. But worker dislocations will not disappear. Many workers will still lose jobs and experience difficulty in finding new employment at similar wages because they lack the latest skills desired by growing businesses. A study conducted for the Workforce Board found that Washington workers who are dislocated experience a permanent loss of 15 percent of their earnings compared to similar workers who are not dislocated.[46] With a significant number of jobs moving offshore due to globalization,[47] need to ensure dislocated workers receive education and training that provide solid employment opportunities is greater than ever.

"In today's volatile economy, few workers can take their job security for granted. A surprisingly large share of American workers and their families have experienced a layoff, according to a recent Work Trends survey conducted by the John J. Heldrich Center for Workforce Development. About 35 percent of workers reported that they or a family member had been laid off from a full- or part-time job in the past three years (30 percent and 5 percent respectively). More than half (57 percent) said that they or a family member had been laid off from a full- or part-time job at some point in their lives (50 percent and 70 percent respectively)."[48]

The major federal program for dislocated workers, Title III of the Job Training Partnership Act became part of WIA, Title I-B, on July 1, 2000. Washington frequently uses these federal funds in tandem with the state's Worker Retraining Program and workers in retraining may be eligible for additional weeks of unemployment insurance under the state's Training Benefits Program. Federally funded services include rapid response services to employers and workers, providing assistance as soon as layoffs are known. Best practices include feasibility studies of options other than closures and layoffs, and the establishment of labor-management committees that bring together the resources and perspectives of both parties to planning, oversight, and problem solving. Peers can bring special knowledge and better rapport to dislocated worker counseling. For workers who become dislocated due to plant closings, ESD and WorkSource centers deliver on-site reemployment services.

Supporting Industry Clusters that Offer Opportunities for Advancement

To be inserted later—information on middle wage jobs project and study by the Seattle Jobs Initiative – Mark Gardner to send information

[46] Westat, Inc, *Net Impact Evaluation of Retraining Under ESHB 1988*, 1997.
[47] For a discussion on outsourcing and globalization see *Chapter One: Tomorrow's Economy*.
[48] John L. Heldrich Center for Workforce Development, Edward J. Bloustein School of Planning and Public Policy, Rutgers, The State University of New Jersey, Getting Back to Work: New Public Private Strategies or Laid-Off American Workers, December 2004.